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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Madhu Rao

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09/22/2008

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EXAMINER

SURVILLO, OLEG

ART UNIT

PAPER NUMBER

2142

MAIL DATE

DELIVERY MODE

09/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/921,936	RAO ET AL.	
	Examiner	Art Unit	
	OLEG SURVILLO	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 and 81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-64 and 81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission dated March 10, 2008 has been entered.

Response to Amendment dated March 10, 2008

2. Applicant's amendment to claim 1 is acknowledged.

Response to Amendment dated July 2, 2008

3. Applicant's election of group I. claims 1-64 and 81 without traverse in the response dated July 2, 2008 is acknowledged. As a result, claims 1-64 and 81 remain pending in the application. Claims 65-80 are canceled. No new claims have been added.

Response to Arguments

4. With regard to the Applicant's remarks dated March 10, 2008:

regarding the rejection of claim 1 under 35 U.S.C. 112, second paragraph, Applicant's amendment has been fully considered and is sufficient. Therefore, previously made rejection has been withdrawn.

Regarding amendment of claim 1 to provide functional language that would link the claimed limitations, the amendment has been fully considered and is sufficient. In particular, claim 1 has been amended to recite: "...wherein either the local area network management system or the wide area network management system uses the address registration information to map the network of routers and the network of switches", which essentially amounts to limitations of dependent claims 13 and 15. Applicants are encouraged to amend independent claims 17, 33, and 49 by introducing analogous limitation into each of these claims for consistency.

Regarding the rejection of claims 1-81 under 35 U.S.C. 102(a) as being anticipated by Cisco document (Cisco Publication: Frame Relay ELMI Address Registration, posted on Dec. 6, 2000), Applicant's declarations under 37 CFR 1.132 to establish that the subject matter of the Cisco document relied on in the rejection of claims 1-81 was derived from the applicants rather than being invented by the author of the Cisco Document and arguments were considered and they are persuasive. Therefore, declarations under 37 CFR 1.132 of Madhu Rao and Srikanthkumar Hosakote are sufficient to overcome the rejection of claims 1-81 based upon the Cisco document as set forth in the last Office action. Thus, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of the newly discovered references.

Claim Objections

5. Claims 13 and 15 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. In particular, the limitations of "the local area network management system uses the address registration information to map the network of switches" and "the wide area network management system uses the address registration information to map the network of routers" have been incorporated into claim 1 in the amendment dated March 10, 2008.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 49-64 are rejected under 35 U.S.C. 112, second paragraph, as failing to comply with the enablement requirement.

Claim 49 incorporates means-plus-function language limitations reciting a function to be performed rather than a definite structure for performing that function.

As evidenced by claim 33, the claimed functionality can be performed by a sequence of computer executable instructions. Therefore, computer readable

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instructions are identified as the corresponding structure that performs the claimed functionality.

Thus, if claim was written as “means for appending and sending”, that claim would be a subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. Clearly, Applicants should not be able to avoid an undue breadth rejection by a mere formalism of splitting a single means (a sequence of computer executable instructions) for performing two functions into two separate means.

As a result, claim 49 is a single means claim, i.e. where a means recitation does not appear in combination with another recited element of means, and is, therefore, subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983)

MPEP 2164.08(a)

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 6, 26, 42, and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 6 (and claims 26, 42, and 58 by extension), the limitation of “address registration information comprises spare bytes” is ambiguous because it is unclear how “information” may comprise “bytes”. It is well known that “byte” is a basic unit of measurement for file size and is made up of 8 bits of data. Therefore “spare bytes” may

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comprise data (information), but whether data (information) comprises "spare bytes" is not clear. Appropriate correction or explanation is required.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 49-64 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 49 incorporates means-plus-function language limitations reciting a function to be performed rather than a definite structure or materials for performing that function.

As to claim 49, limitations: "means for appending" and "means for sending" are interpreted to invoke 35 U.S.C. 112, sixth paragraph.

Evidence is present in claim 33 which suggests that functionality of appending and sending can be performed purely by a sequence of computer executable instructions. Therefore, "means for appending" and "means for sending" are reasonably interpreted in light of claim 33 as computer instructions.

Since both means recitations are computer executable instructions, a system of a computer software per se is not in one of the statutory categories.

The use of the word "system" does not inherently mean that the claim is directed to a machine. Only if at least one of the claimed elements of the system is a physical

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part of a device can the system as claimed constitute part of a device or a combination of devices to be a machine within the meaning of 35 U.S.C. 101.

As to claims 50-64, additional means-plus-function language does not introduce any tangible elements, as evidenced by corresponding claims 34-48 directed to computer executable instructions performing specified function(s).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 2, 4-23, 25-39, 41-55, 57-64, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Non-Patent Literature document titled "Integrated Local Management Interface (ILMI) Specification, Version 4.0" (hereinafter *ILMI Spec*) in view of Non-Patent Literature document titled "LAN/WAN Management Integration using ATM CNM Interface" by Hanaki et al. (hereinafter *Hanaki*).

As to claim 1, *ILMI Spec* shows:

address registration information (section 9 at page 60) to be appended to a message [ILMI message] sent between a router [first ATM device] and a switch [second ATM device] (Fig. 1 at page 3) over a connection between the router and the switch [ILMI communication takes place between adjacent IMEs over physical links or virtual links] (page 1, under section Scope), wherein either the local area network management

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system or the wide area network management system [Network Management Station] uses the address registration information to map the network of routers and the network of switches (pages 77-79 section Annex A. Network Management Access to ILMI data).

ILMI Spec does not expressly show NMS at Fig. 6 is specifically a local area network management system (LMS) to manage and configure a network of routers, and/or a wide area network management system (WMS) to manage and configure a network of switches.

Hanaki shows:

a local area network management system to manage and configure a network of routers [LAN NMS] (page 13; Fig. 1 section 2 at page 14); and

a wide area network management system to manage and configure a network of switches [WAN OS (CNM Agent)] (page 13; Fig. 1 section 2 at page 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of ILMI Spec and those of Hanaki in order to perform cooperation between LAN and WAN at the network management level and end-to-end connections management over the whole network by using connection information from both LANs and WANs (Hanaki, page 13 under section 1. Introduction).

As to claim 2 (and claims 23, 39, and 55 by extension), ILMI Spec shows that the address registration information comprises an interface index (section 8.2.2.1 at page 19 and section 9.4.1.1 at page 62).

As to claim 4 (and claims 25, 41, and 57 by extension), ILMI Spec shows that the interface index comprises a port number from which the message was sent [Interface Index object (atmf**PortIndex**) (emphasis added) that identifies a particular physical or virtual interface on the ATM device] (section 8.2.2.1 at page 19).

As to claim 5 (and claims 22, 38, and 54), ILMI Spec shows that the address registration information comprises an Internet Protocol address [network prefix] (section 9.4.1.2 at page 63).

As to claim 6 (and claims 26, 42, and 58), these claims are examined as best understood. To this extent, it would have been an obvious matter of design choice to include spare bytes in an SNMP or an ILMI message sent between devices since having spare bytes does not appear to solve a particular problem, nor it is for a particular purpose, and it appears that the method/system/program would function equally well without spare bytes.

As to claim 7 (and claims 27, 43, and 59), ILMI Spec shows that the router sends the message (pages 1-2 under section Scope; page 4 under section 1. ILMI Functions; pages 77-79 section Annex A. Network Management Access to ILMI data).

As to claim 8 (and claims 28, 44, and 60), ILMI Spec shows that the switch sends the message (pages 1-2 under section Scope; page 4 under section 1. ILMI Functions; pages 77-79 section Annex A. Network Management Access to ILMI data).

As to claim 9 (and claims 29, 45, and 61), ILMI Spec shows that the message is an enhanced local management interface message [ILMI message] (pages 1-2 under section Scope; page 4 under section 1. ILMI Functions; pages 77-79 section Annex A. Network Management Access to ILMI data).

As to claim 10 (and claims 30, 46, and 62), ILMI Spec shows that the message is sent when the network of switches and the network of routers are first configured (sections 9.2.1 to 9.2.6 at page 61; section 9.3 General Description of Procedures at page 62).

As to claim 11 (and claims 31, 47, and 63), ILMI Spec shows that the message is sent when the network of switches and the network of routers has a change in configuration (sections 9.2.1 to 9.2.6 at page 61; section 9.3 General Description of Procedures at page 62).

As to claim 12 (and claims 32, 48, and 64), ILMI Spec shows that the message is sent at a regular interval (sections 9.2.1 to 9.2.6 at page 61; section 9.3 General Description of Procedures at page 62).

As to claim 13, ILMI Spec in view of Hanaki shows all the elements, as discussed per claim 1 above.

As to claim 14, ILMI Spec in view of Hanaki shows that the local area network management system configures the network of switches [performing configuration discovery, fault isolation and troubleshooting. See page 78, first paragraph in ILMI Spec] (as discussed per claim 1 above).

As to claim 15, ILMI Spec in view of Hanaki shows all the elements, as discussed per claim 1 above.

As to claim 16, ILMI Spec in view of Hanaki shows that the wide area network management system configures the network of routers [performing configuration discovery, fault isolation and troubleshooting. See page 78, first paragraph in ILMI Spec] (as discussed per claim 1 above).

As to claim 17, ILMI Spec shows:
appending address registration information (section 9 at page 60) to a message [ILMI message]; and

sending the message between a router [first ATM device] and a switch [second ATM device] (Fig. 1 at page 3) [ILMI communication takes place between adjacent IMEs over physical links or virtual links] (page 1, under section Scope).

ILMI Spec does not expressly show a network of routers and a network of switches.

Hanaki shows:

a network of routers (page 13; Fig. 1 section 2 at page 14); and

a network of switches (page 13; Fig. 1 section 2 at page 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of ILMI Spec and those of Hanaki in order to perform cooperation between LAN and WAN at the network management level and end-to-end connections management over the whole network by using connection information from both LANs and WANs (Hanaki, page 13 under section 1. Introduction).

As to claims 18, 34, and 50, ILMI Spec in view of Hanaki shows using the address registration information to map the router network from a wide area network management system controlling the switch network, as discussed per claim 1.

As to claims 19, 35, and 51, ILMI Spec in view of Hanaki shows configuring the router network using the wide area network management system, as discussed per claim 16.

As to claims 20, 36, and 52, ILMI Spec in view of Hanaki shows using the address registration information to map the switch network from a local area network management system controlling the router network, as discussed per claim 1.

As to claims 21, 37, and 53, ILMI Spec in view of Hanaki shows configuring the switch network using the local area network management system, as discussed per claim 14.

As to claim 33, ILMI Spec and Hanaki discuss a computer implemented method and system as discussed per claims 1 and 17. Thus, ILMI Spec in view of Hanaki inherently shows a machine-readable storage medium embodying a sequence of instructions executable by a machine to perform the method steps, as discussed per claim 17.

As to claim 49, ILMI Spec in view of Hanaki inherently shows means for appending address registration information to a message; and means for sending the message between a router of a router network and a switch of a switch network, as discussed per claim 17.

As to claim 81, ILMI Spec in view of Hanaki shows:
appending address registration information to a message (as discussed per claim 17);

sending the message between a router of a router network and a switch of a switch network (as discussed per claim 17);

using the address registration information to map the router network from a wide area network management system controlling the switch network (as discussed per claims 1 and 18);

configuring the router network using the wide area network management system (as discussed per claims 16 and 19);

using the address registration information to map the switch network from a local area network management system controlling the router network (as discussed per claims 1 and 20); and

configuring the switch network using the local area network management system (as discussed per claims 14 and 21).

14. Claims 3, 24, 40, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over ILMI Spec in view of Hanaki and in further view of Crooks (US 2002/0055988 A1).

As to claim 3 (and claims 24, 40, and 56 by extension), ILMI Spec shows that the interface index comprises the Interface Index object (atmf**PortIndex**) (emphasis added) that identifies a particular physical or virtual interface on the ATM device (section 8.2.2.1 at page 19).

ILMI Spec in view of Hanaki does not expressly show the interface index comprising a slot number from which the message was sent.

Crooks shows identifying each LAN component by configuration information such as a slot number or a port number (par. [0021]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system/method/program of ILMI Spec in view of Hanaki by having a slot number as the interface index object as an alternative to a port number in order to alternatively identify each LAN component from which information is sent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 8:30am - 6:00pm; F 8:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Andrew Caldwell/
Supervisory Patent Examiner, Art
Unit 2142

Examiner: Oleg Survillo

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